



# **Federal Student Aid (FSA)**

*FP Data Mart – Release 2*

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## **Testing Acceptance**

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# FP Data Mart – Release 2

## Testing Acceptance

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## FP Data Mart – Release 2 Testing Acceptance

### Document File Name

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This document can be found at the following location on eProject:  
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### Document Revision History

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June 25, 2002      Document submitted to FSA for comments

### Distribution

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Copy No.	Name	Location

### Executive Summary

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This document describes how FP Data Mart – Release 2 will be tested prior to being migrated into a production environment. Topics covered include unit testing by programmers, system testing, environment testing, user acceptance testing, and performance testing.

1. Unit testing will be performed by the programmers in the development environment.
2. A system testing team consisting of FP Data Mart Modernization Partner personnel will review the requirements document and will create test conditions and test scripts.
3. An environment testing team consisting of FP Data Mart Modernization Partner personnel, Credit Management Data Mart Modernization Partner personnel, and Data Mart application maintenance personnel will execute the reports which they maintain to verify that their reports work correctly after migration of the Release 2 objects into the testing environment.
4. A user acceptance testing team consisting of FP Data Mart FSA representatives will review the requirements document, the test conditions, and the test scripts and identify existing scripts that can be used as is or with some modifications to test the requirements.
5. The user acceptance testing team may perform a gap analysis between the requirements and the existing scripts and identify new scenarios that will need to be tested.
6. The user acceptance testing team may write new test scripts and modify existing scripts (with some support from the FP Data Mart Modernization Partner personnel).
7. The system testing team will identify data requirements (specific reference data that must be established prior to testing). Data from the source systems (NSLDS, FMS, PEPS) will be loaded into the test environment.
8. The user acceptance testing team will use the same data as the system testing team. Data for many GAs, Lenders, Servicers, etc. exist in the testing environment. The user acceptance testing team

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may select different specific GAs, Lenders, Servicers, etc. than those used by the system testing team.

9. A test environment will be established, and reference data loaded into it.
10. The Microstrategy and Informatica team leads will work with the testing team lead and the Data Mart application maintenance vendor to migrate data and repository objects into the test environment.
11. The system testing team will manually execute the pre-written test scripts.
12. The user acceptance testing team may manually execute the pre-written test scripts.
13. The testing teams and development team will work to resolve issues
14. The software will be functionally accepted, and migrated using configuration management standards documented by the Data Mart application maintenance vendor.
15. A performance testing team will modify existing Credit Management Data Mart performance testing scripts by including reports from Release 2 of the FP Data Mart project.
16. The performance testing team will then conduct tests to determine the impact of the reports from Release 2 of the FP Data Mart on the shared data mart environment.

# **FP Data Mart – Release 2 Testing Acceptance**

## **1 INTRODUCTION**

### **1.1 PURPOSE & SCOPE**

This document describes the overall testing strategy for the FP Data Mart – Release 2 project. This release required the creation of new extracts from the source systems (NSLDS, FMS, PEPS), new mappings of source-to-target data using the Informatica commercial-off-the-shelf (COTS) tool, and new reports using the Microstrategy online analytical processing (OLAP) tool. This application will undergo unit, system, environment, user acceptance, and performance testing, before being made available to FSA data mart users and the FFEL community. Successful completion of these testing phases will ensure that the new release meets both the business needs of the end users as well as the functional requirements specified in the Requirements Matrix and Design Document. The objectives of the tests are to:

- Ensure that a quality product is delivered to the Community
- Minimize risk
- Find and fix problems early in the process
- Follow Capability Maturity Model (CMM) guidelines and data mart defined procedures

### **1.2 BACKGROUND**

FP Data Mart – Release 2 is being developed as part of the Financial Partners (FP) Channel's efforts to provide more analytical capabilities. The goal of the overall FP Data Mart is to provide executive/summary information and decision support capabilities around several key business functions that include Risk Management, Customer Relationship Management, Compliance Management, and Portfolio Management. The FP Channel is responsible for both current and retired loan programs and as such is under customer and program obligation to ensure the capture and comparative ability of all programs. By collecting information from several sources into a central location, personnel in the Channel as well as external partners will be able to more efficiently identify areas in which each party may assist the other while improving the support for students within the Federal Family Education Loan Program.

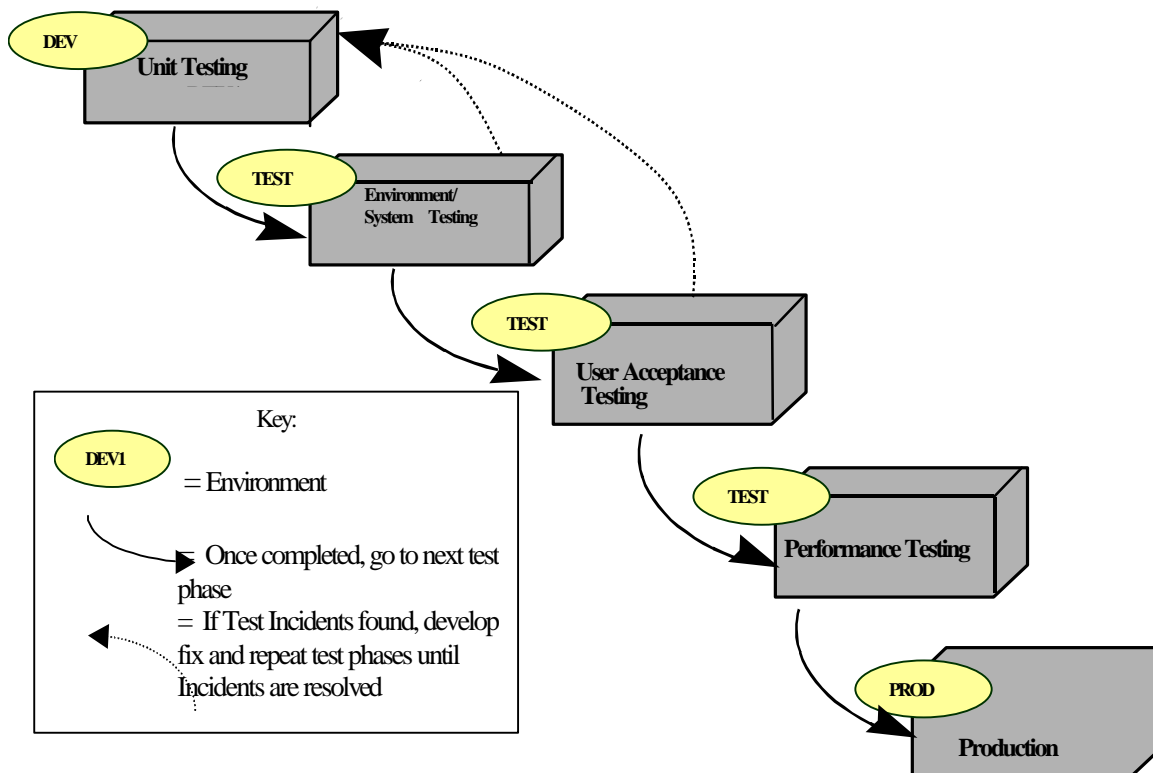
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### 2 TEST OVERVIEW

This section defines the types of testing that will take place (unit, system, environment, user acceptance, and performance testing), and the effort to conduct the testing.

Several phases of testing will be conducted to ensure that the new processes in Release 2 meet the business needs of FSA. The testing will also ensure that the new application meets the requirements specified in the Requirements and Design Documents (refer to the Requirements and Design document previously delivered to FSA). In all phases of testing, the FP Data Mart – Release 2 Test Teams will be responsible for identifying test incidents and communicating them to the Development Team. The figure below shows the relationships between the various phases of testing that will be conducted.

This project will follow the configuration management procedures documented with the Data Mart Application Maintenance vendor when migrating Microstrategy and Informatica objects from the development to the testing environment. The Configuration Manager is responsible for migrating the objects. The test environment requires greater access control and as such the number of people with the ability to modify objects in this environment or migrate objects to this environment is limited.



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### **2.1 Unit Testing**

#### **2.1.1 Unit Testing Purpose**

The FP Data Mart – Release 2 Development Team will conduct unit testing to ensure that each developed code/object meets its particular business needs and requirements. Unit testing will be conducted in the Development environment.

#### **2.1.2 Entry and Exit Criteria**

Entry Criteria for Unit Test:

- Design document developed and approved
- Project workplan updated
- Requirement document updated if changed
- Configuration Management plan completed (will use the Configuration Management plans for Microstrategy and Informatica used by the Data Mart application maintenance vendor)
- All code for the to-be tested component is complete and has been successfully compiled.

Exit Criteria for Unit Test:

- All unit tests have been executed and expected results have been met.
- Any expected results not initially met have been logged and corrected. The fix has been re-tested and the expected results have been met.
- Developer and Test Lead reviews and signs off on the unit test results.

### **2.2 System Testing**

#### **2.2.1 System Testing Purpose**

The FP Data Mart Modernization Partner Test Team will conduct system testing on the Microstrategy reports and Informatica mappings to ensure that all developed code/objects work together to meet the intended business needs and requirements.

System Testing verifies that all system components are working as designed. This includes all components involved in the extraction of data from the source system through displaying the information to authorized users. System testing will be conducted in the Test environment.

#### **2.2.2 Entry and Exit Criteria**

Entry Criteria for System Test Execution:

- Test Plans and test scripts developed
- Developed solution, including source, object, and execution code has been delivered (e.g. All extract programs, scripts, Informatica mapping processes, and MicroStrategy



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reports are complete.) (Note: the reports developed by the FP Power Users will be tested if available. These reports are not required to be completed prior to deployment.)

- Requirement document updated if changed
- Project work plan updated
- Support organization has been identified
- System security phase checklist (modified) completed and approved
- Resources to execute tests are available.
- The System Test environment is in place.
- Data contained in the lookup/dimension tables was previously verified for valid values.

Exit Criteria for System Test:

- Test results have been developed
- Developed and tested solution, including source, object, and execution code has been accepted
- Reports display information to satisfy the requirements.
- Information on reports has been verified.
- Identified errors and defects have been corrected and re-tested.
- All issues and incidents have been properly documented and worked through the resolution process.
- All reviews were conducted, and that the review yields satisfactory results.

### ***2.2.3 Number of Levels of System Testing***

Good testing practices indicate that the following levels of testing should be undertaken during system testing:

- Environment setup—verifying code migration, string testing to ensure that basic functionality works, data setup, *etc.* – 5% of testing effort
- Basic functionality/normal processes – 75% of testing effort
- Exception cases – 20% of testing effort

### ***2.2.4 Number of Passes for Each Level***

- 1 First pass—manual
- 2 Second pass (if needed) —manual, to re-test failed items from first pass
- 3 Third pass (if needed) – manual, to re-test failed items from the second pass. Anything more than 3 passes probably indicates a serious quality problem, and will be reported to the Project Team Lead.

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### **2.3 Environment Testing**

#### **2.3.1 Environment Testing Purpose**

The FP Data Mart Modernization Partner Test Team working with the Credit Management Data Mart team and the Data Mart application maintenance vendor will conduct environment testing on the Microstrategy reports to ensure that the newly migrated reports do not adversely affect the processing and results of existing reports in the shared environment.

Each team will identify the reports that they tested and signoff that the reports still function appropriately or identify those reports that are experiencing issues. For reports that are not functioning appropriately, the teams will work together to resolve the issues.

#### **2.3.2 Entry and Exit Criteria**

Entry Criteria for Environment Test Execution:

- Test plans and list of reports developed from the various data marts
- Developed solution, including source, object, and execution code has been delivered (e.g. All extract programs, scripts, Informatica mapping processes, and MicroStrategy reports are complete.)
- Resources to execute tests are available.
- The Testing environment is in place.

Exit Criteria for Environment Test:

- Test results have been developed (within the team responsible for testing the report)
- Reports display similar information after the environment test as they did prior to the new reports being migrated into the testing environment.
- Identified errors and defects have been corrected and re-tested.
- All issues and incidents have been properly documented and worked through the resolution process.
- All reviews were conducted, and that the review yields satisfactory results.

### **2.4 User Acceptance Testing**

#### **2.4.1 User Acceptance Testing Purpose**

The FP Data Mart – Release 2 FSA Test Team will conduct user acceptance testing to ensure that the reports are ready for implementation. User acceptance indicates that the reports are ready for deployment to the production-level system, and is the final step in the process of development and functional testing. User acceptance testing will be conducted in the Testing environment.

#### **2.4.2 Entry and Exit Criteria**

Entry Criteria for User Acceptance Test Execution:

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- Test Plans and test scripts developed
- Developed solution, including source, object, and execution code has been delivered (e.g. All extract programs, scripts, Informatica mapping processes, and MicroStrategy reports are complete.) (Note: the reports developed by the FP Power Users will be tested if available. These reports are not required to be completed prior to deployment.)
- Resources to execute tests are available.
- The Testing environment is in place.

### **Exit Criteria for User Acceptance Test:**

- Test results have been developed
- Developed and tested solution, including source, object, and execution code has been accepted
- Reports display information to satisfy the requirements.
- Information on reports has been verified.
- Identified errors and defects have been corrected and re-tested.
- All issues and incidents have been properly documented and worked through the resolution process.
- All reviews were conducted, the reviews yielded satisfactory results, and the client has accepted and signed-off on the test scripts.

## **2.5 Performance Testing**

### ***2.5.1 Performance Testing Purpose***

The FP Data Mart – Release 2 Modernization Partner Test Team will conduct performance testing to ensure that the newly developed reports and the expected additional number of report executions do not adversely affect the existing reports and users in the shared environment. A testing tool will be used to simulate a large number of users executing the various reports from the different data marts. The testing scripts developed by the Credit Management Data Mart performance testing team will be modified to include the newly developed reports from Release 2 of the FP Data Mart.

### ***2.5.2 Entry and Exit Criteria***

#### **Entry Criteria for Performance Test Execution:**

- Test Plans and test scripts developed
- Developed solution, including source, object, and execution code has successfully completed system/user acceptance testing
- Resources to execute tests are available.
- The Testing environment is in place.

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Exit Criteria for Performance Test:

- Reports executed within acceptable time frames
- The shared environment can support the expected average number of users
- Identified errors and defects have been corrected and re-tested.
- All issues and incidents have been properly documented and worked through the resolution process.
- All reviews were conducted, and that the review yields satisfactory results.

For additional information regarding the stress test, please refer to the FP Data Mart – Release 2 Stress Test Plan.

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### **3 Level Of Effort**

#### **3.1 Determine Total Testing Effort**

Using information from previous data mart testing efforts, an estimate of the FP Data Mart – Release 2 testing effort in man-hours has been developed.

1. Review Requirements and Design; determine which conditions can be tested by (1) creating new scripts, (2) modifying the new scripts to support similar reports, (3) modifying existing scripts (performance testing).
2. Estimate completion time for scripts based on complexity (High, Medium, or Low)
3. Factor in the effort for re-test of failed scripts.

As of 4/15/2002, we estimate that testing will be a 3 to 4 person-month effort, depending upon the expertise of the test team.

#### **3.2 Determine Available Resources**

1. Determine desired composition of team and skill level of resources (need script writers, script executors, task manager)
  - Functional experts
  - Testing experts
2. Gather estimate from FSA team on available hours
3. Gather estimates from Data Mart application maintenance vendor on available hours
4. Receive commitment from FSA for user acceptance test team
5. Allow for external factors (other time commitments)
6. Prepare proposal on staffing hours for both government and Modernization Partner

#### **3.3 Testing Team Roles and Responsibilities**

The Testing Team will consist of 1 full-time resource and many part-time resources. The majority of the part-time resources will be the FSA resources executing the user acceptance test.

Various roles will be required to complete the different levels of testing.

##### **3.3.1 Test Team Lead**

The main responsibilities for this role include:

- Coordinate and manage the system, environment, user acceptance, and performance testing efforts.
- Develop the Test Plan.
- Develop the system test and environment conditions.
- Assist the FSA users in developing additional user acceptance testing conditions.
- Develop/review system, environment, user acceptance, and performance test scripts.

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- Review system, environment, user acceptance, and performance test results.
- Assist team with determining solutions to incidents and problems.
- Assign SIRs to test team members.
- Manage system, environment, user acceptance, and performance test scope.
- Monitor the test activities and report testing status to the project manager.
- Review quality and completeness of testing activities.
- Maintain binders of completed test scripts for system and user acceptance testing.
- Work with project management to ensure timely issue resolution.

#### **3.3.2 Test Team Analyst**

The main responsibilities for this role include:

- Develop system and environment test scripts.
- Execute the system and environment tests.
- Evaluate the system and environment test results.
- Identify and log all incidents and problems encountered during testing activities.

#### **3.3.3 Development/Fix-it Analyst**

The main responsibilities for this role include:

- Review reported incidents and problems.
- Determine solutions to correct problems.
- Update mappings and reports as required.
- Work with source system developers to correct issues with source system input files.
- Verify incidents and problems are corrected in the development environment.
- Assist with migration of the correction from the development environment to testing environment.

#### **3.3.4 FSA Test Team Coordinators**

The main responsibilities for this role include:

- Develop additional user acceptance test conditions and test scripts.
- Execute the user acceptance tests.
- Assist co-workers with test executions.
- Evaluate the user acceptance test results from co-workers in the same regional office.
- Send testing results to test team lead for inclusion in testing binder.
- Identify and log all incidents and problems encountered during testing activities.

#### **3.3.5 FSA Test Team Analyst**

The main responsibilities for this role include:

- Execute the user acceptance tests.

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- Evaluate the user acceptance test results.
- Identify and log all incidents and problems encountered during testing activities.

### ***3.3.6 Performance Test Team Analyst***

The main responsibilities for this role include:

- Modify Credit Management Data Mart performance testing scripts for FP data mart use.
- Update the scripts using the testing tool.
- Execute the performance tests.
- Evaluate the performance test results.
- Identify and log all incidents and problems encountered during testing activities.
- Work with Microstrategy resources to correct/adjust configuration settings as appropriate.

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### **4 Develop Scripts**

The process for developing test scripts will be as follows:

1. Identify Test Cycles from the Requirements document
2. Identify Test Conditions from Requirements and Design documents
3. Write new scripts or modify existing scripts

#### **4.1 Identify Test Cycles**

Identify requirements from the Requirements document. Each identified report, source system, and other general condition (e.g. Security, Integrity, etc.) will be its own Test Cycle.

#### **4.2 Identify Test Conditions**

Using the requirements and design documents, identify the detail information necessary to execute a report. Each item identified on the requirements document will become a test condition. Some conditions may only be tested during performance test. Other conditions are based upon Service Level Agreements (SLAs) with the Virtual Data Center (VDC) and can not be readily tested.

These test conditions should be entered into an Excel spreadsheet.

#### **4.3 Map Test Conditions to Requirements**

The test conditions will be mapped to the requirements.

#### **4.4 Write Scripts**

The test team lead will work with the test team analysts to create new scripts and modify existing scripts. The scripts will contain steps that identify the source system reports/queries to execute in order to verify the results of the data mart reports.

##### **4.4.1 Test Data**

The team will use actual production data extracted from the source systems as its test data. This will allow the Informatica mappings to be verified when the data on the reports is verified.

The test team analyst executing the script will run the identified reports/queries from the source system. The tester may choose the Lender/Guaranty Agency/School/etc. on which to execute the data mart report. This allows for a more random approach of verifying the data.

##### **4.4.2 Write New Scripts**

New scripts will be written for system test. It is expected that these same scripts will be used for the user acceptance test.



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### ***4.4.3 Modify Existing Scripts***

Existing scripts from the Credit Management Data Mart performance test will be modified to take into account the new reports from Release 2 of the FP Data Mart. The resulting scripts will then contain reports from both Release 1 and Release 2 of the FP Data Mart and reports from the Credit Management Data Mart.

### **4.5 Numbering Schemes**

Each test condition is sequentially numbered within the test cycle.

### **4.6 Develop Script Standards**

Refer to section 9.2 for an example of an FP Data Mart script. Each script contains the following information:

1. Level of Testing (i.e. System Test User Acceptance Test)
2. Test Cycle Number
3. Cycle Executed by
4. Date Cycle was Executed
5. Cycle Execution Status (Pass/Fail)
6. Scenario Description
7. Pre-checks/Dependencies

For each step within the script, the following information is shown in table format:

1. Step number
2. Action
3. Test Data
4. Expected Results
5. Test Condition Cross Reference
6. Status (Pass or Fail)
7. Actual Results/Comments

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#### **5 Define Data Requirements**

Reference data (data in the Lookup/Dimension tables) must be defined and loaded into the system prior to testing. This data includes:

1. Guaranty Agency and Lender profile
2. Codes and decodes for various statuses and types (i.e. Loan Type Code, Loan Status Code, Review status, etc.)
3. User IDs to access the reports

#### **6 Execute Test Scripts**

##### **6.1 Distribute the Scripts**

The test team lead/FSA test team coordinator will assign scripts to the test team to optimize throughput, taking into consideration such factors as team availability, familiarity with reports, *etc.*

##### **6.2 Execute Scripts**

The test team, under the supervision of the test team leader/FSA test team coordinator, will execute the scripts according to the step-by-step directions on each script. Scripts that pass will be signed off and stored in a binder. Scripts that fail should be dealt with as described in the following section.

##### **6.3 Identify and Resolve Issues**

The following process will be followed for identifying and resolving problems encountered during testing.

1. Tester discovers a discrepancy with a script and works with another tester to determine if the problem is with the software, the test script, or some other source. This will serve as a form of triage to identify true issues, and to not bother the programmers with issues not related to the code.
2. If the test team determines that the problem is with the software, the tester should work with the developer/fix-it analyst to recreate the problem, and provide supporting details such as screen prints. The tester documents the problem by writing “Fail” in the Pass/Fail column of the script, at the step where the script failed. The tester should also write the date and time the failure was noted.
3. All incidents will be tracked with the Microsoft Access database “Mod Partner Ops Tracking Database”. (Refer to Section 9.3 for a sample of the data entry screen of the Tracking Database.) In addition to tracking software failures, the team will also track failures related to undefined requirements, faulty scripts, and “other.”
4. The test team lead will assign the problem to a developer to correct it.
5. The developer should work with the tester in the development environment to ensure that the software change fixed the problem.
6. Depending upon the required change, other reports that may be impacted by the change will be regression tested.

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7. Once the software change is verified, the test team lead will request that the changes are migrated to the test environment. This will be done following the existing data mart configuration management processes for Informatica and Microstrategy.
8. The tester will confirm, in the test environment, that the software change fixed the problem.
9. The tester will note, in the Pass/Fail column of the script, the date and time that the step of the script was successfully executed, and continue with the script.

The key to quickly resolving software defects is direct communication between the tester and the developer who is fixing the problem. The test team lead should be kept in the loop, but must not become a bottleneck.

### **6.4 Monitoring and Reporting Testing Progress**

Testing progress will be tracked by test cycle.

The Microsoft Excel Testing control sheets will be used as a tracking tool to keep current on:

1. Total scripts to test
2. Scripts tested to date
3. Tester name
4. Date tested
5. Pass/Fail
6. Date Re-tested

The Microsoft Access “Mod Partner Ops Tracking Database” will be used as a tracking tool to keep current on:

1. Problems found, by category (software, database, ill-defined requirements, *etc.*)
2. Solution
3. Date Re-tested

The test team lead will provide weekly updates of completed scripts, success/correction percentages to the project leads. The test team lead will also update the project plan.

## **7 Testing Schedule**

The test schedule section will cover the overall FP Data Mart test schedule, security, milestone information, personnel requirements and deliverable materials.

### **7.1 Overall Test Schedule**

The testing workplan in Section 9.1 reflects the time duration of System Test, Environment Test, User Acceptance Test and Performance Test. The workplan includes tasks, percentage (%) complete, duration, begin and end dates, and resource allocation

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#### **7.2 Deliverable Materials**

The following System, Integration, User Acceptance Test, and Performance Test deliverables/work products will be delivered to the client for review as part of the Release 2 testing efforts:

- Testing Plan
- Test Cycles and conditions
- Tested extract programs/queries
- Tested Informatica mappings
- Tested Microstrategy reports
- Test Results and Evaluation Report (Delivered after to the testing effort)

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## 8 APPENDICES

### 8.1 Testing Workplan

ID	Task Name	Start	Finish	% Complete	Resource Names	Apr '02	May '02	Jun '02
						Apr	May	Jun
78	<b>System/Environment/User/Stress Test</b>	<b>Mon 4/15/02</b>	<b>Tue 6/4/02</b>	<b>96%</b>				
79	<b>System Test</b>	<b>Mon 4/15/02</b>	<b>Fri 5/24/02</b>	<b>94%</b>				
80	<b>Prepare for System Test</b>	<b>Mon 4/15/02</b>	<b>Fri 5/24/02</b>	<b>92%</b>	Ahmad,Nancy			
81	Identify reports to use for Comparison	Mon 4/15/02	Fri 5/10/02	100%	Ahmad		Ahmad	
82	Identify Real data to use	Mon 4/15/02	Fri 5/10/02	100%	Ahmad		Ahmad	
83	Develop 'Fake' data to use	Mon 4/15/02	Fri 5/17/02	100%	Ahmad		Ahmad	
84	Determine Test conditions	Mon 4/15/02	Fri 4/26/02	100%	Ahmad,Nancy		Ahmad,Nancy	
85	Develop Test Scripts (Mod Ptr Reports)	Mon 4/15/02	Fri 5/10/02	100%	Ahmad,Nancy,Lisa		Ahmad,Nancy,Lisa	
86	Develop Test Scripts (FSA Reports)	Fri 5/3/02	Fri 5/24/02	50%	Nancy,Ahmad,Lisa		Nancy,Ahmad,Lisa	
87	Perform System Test	Wed 5/8/02	Fri 5/24/02	100%	Ahmad,Tina,Chirayu,Lisa		Ahmad,Tina,Chirayu,Lisa	
88	Correct System Test SIRs	Wed 5/15/02	Fri 5/24/02	100%	Tina,Chirayu		Tina,Chirayu	
89	Verify System Test	Wed 5/15/02	Fri 5/24/02	100%	Ahmad,Nancy		Ahmad,Nancy	
90	<b>Environment Test</b>	<b>Mon 5/20/02</b>	<b>Fri 5/24/02</b>	<b>100%</b>				
91	<b>Prepare for Environment Test</b>	<b>Mon 5/20/02</b>	<b>Tue 5/21/02</b>	<b>100%</b>	Ahmad,Nancy			
92	Identify reports (from all Data Marts) to use for Testing	Mon 5/20/02	Tue 5/21/02	100%	Ahmad		Ahmad	
93	Work with Data Mart 'owners' to test	Mon 5/20/02	Tue 5/21/02	100%	Ahmad		Ahmad	
94	Perform Environment Test	Tue 5/21/02	Fri 5/24/02	100%	Tina,CMDM		Tina,CMDM	
95	Correct Environment Test SIRs	Tue 5/21/02	Fri 5/24/02	100%	Tina,Chirayu		Tina,Chirayu	
96	Verify Environment Test	Thu 5/23/02	Fri 5/24/02	100%	Ahmad,Nancy		Ahmad,Nancy	
97	<b>User Acceptance Test</b>	<b>Mon 5/13/02</b>	<b>Fri 5/31/02</b>	<b>100%</b>				
98	<b>Prepare for User Acceptance Test</b>	<b>Mon 5/20/02</b>	<b>Wed 5/22/02</b>	<b>100%</b>	Ahmad,Nancy			
99	Identify reports to use for Comparison	Mon 5/20/02	Wed 5/22/02	100%	SMEs		SMEs	
100	Identify Real data to use	Mon 5/20/02	Wed 5/22/02	100%	SMEs		SMEs	
101	Determine Additional Test conditions	Tue 5/21/02	Wed 5/22/02	100%	Nancy,SMEs		Nancy,SMEs	
102	Develop Additional Test Scripts	Mon 5/20/02	Wed 5/22/02	100%	Nancy,SMEs		Nancy,SMEs	
103	Perform User Acceptance Test	Mon 5/13/02	Fri 5/31/02	100%	SMEs		SMEs	
104	Correct UAT Test SIRs	Wed 5/15/02	Fri 5/31/02	100%	Tina,Chirayu		Tina,Chirayu	
105	Verify UAT Test	Thu 5/30/02	Fri 5/31/02	100%	Ahmad,Nancy,SMEs		Ahmad,Nancy,SMEs	
106	<b>Stress Test</b>	<b>Thu 5/23/02</b>	<b>Tue 6/4/02</b>	<b>100%</b>				
107	<b>Prepare for Stress Test</b>	<b>Thu 5/23/02</b>	<b>Wed 5/29/02</b>	<b>100%</b>				
108	Identify reports (from all data marts) to use for Comparison	Thu 5/23/02	Fri 5/24/02	100%	Ahmad		Ahmad	
109	Determine Test conditions	Thu 5/23/02	Fri 5/24/02	100%	Ahmad		Ahmad	
110	Develop Test Scripts	Tue 5/28/02	Wed 5/29/02	100%	Ahmad		Ahmad	
111	Perform Stress Test	Thu 5/30/02	Mon 6/3/02	100%	Ahmad,Chirayu,Tina		Ahmad,Chirayu,Tina	
112	Correct Stress Test SIRs	Thu 5/30/02	Mon 6/3/02	100%	Tina,Chirayu		Tina,Chirayu	
113	Verify Stress Test	Mon 6/3/02	Tue 6/4/02	100%	Ahmad,Nancy		Ahmad,Nancy	
114	Support System/Env/User/Stress Test	Mon 4/15/02	Tue 6/4/02	100%	Team		Team	

## FP Data Mart – Release 2 Testing Acceptance

## 8.2 Sample Test Script

System Test							
Cycle: 1 LP: Lender ID 799 Late Report							
Cycle Executed By:							
Date:							
Cycle Execution Status (Pass/Fail):							
Scenario Description:							
Pre-checks/Dependencies:							
Step		Test Data	Expected Result	Condition X-ref	Status (Pass or Fail)	Actual Results/ Comments	
1	Obtain a copy of the Lender Search Report for the 3 selected Lenders (or look online using the FFEL system) for 3 sequential fiscal years (user can select which 3 years). All 3 lenders should be in the Same State.		n/a				
2	Document the State and Lender ID selected and the quarters used	State: _____ Lender ID 1: _____ Lender ID 2: _____ Lender ID 3: _____ Quarters: _____	n/a				
3a	Calculate the following: Number of Days Late (Date Received - (Fiscal Quarter Ending Date + 90))	LENDER ID 1: _____ Quarter 1: _____ # of Days Late: _____ Quarter 2: _____ # of Days Late: _____ Quarter 3: _____ # of Days Late: _____ Quarter 4: _____ # of Days Late: _____ Quarter 5: _____ # of Days Late: _____ Quarter 6: _____ # of Days Late: _____ Quarter 7: _____ # of Days Late: _____ Quarter 8: _____ # of Days Late: _____ Quarter 9: _____ # of Days Late: _____ Quarter 10: _____ # of Days Late: _____ Quarter 11: _____ # of Days Late: _____ Quarter 12: _____ # of Days Late: _____	n/a				

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Step		Test Data	Expected Result	Condition X-ref	Status (Pass or Fail)	Actual Results/ Comments
3b		LENDER ID 2: Quarter 1: _____ # of Days Late: _____ Quarter 2: _____ # of Days Late: _____ Quarter 3: _____ # of Days Late: _____ Quarter 4: _____ # of Days Late: _____ Quarter 5: _____ # of Days Late: _____ Quarter 6: _____ # of Days Late: _____ Quarter 7: _____ # of Days Late: _____ Quarter 8: _____ # of Days Late: _____ Quarter 9: _____ # of Days Late: _____ Quarter 10: _____ # of Days Late: _____ Quarter 11: _____ # of Days Late: _____ Quarter 12: _____ # of Days Late: _____				
3c		LENDER ID 9: Quarter 1: _____ # of Days Late: _____ Quarter 2: _____ # of Days Late: _____ Quarter 3: _____ # of Days Late: _____ Quarter 4: _____ # of Days Late: _____ Quarter 5: _____ # of Days Late: _____ Quarter 6: _____ # of Days Late: _____ Quarter 7: _____ # of Days Late: _____ Quarter 8: _____ # of Days Late: _____ Quarter 9: _____ # of Days Late: _____ Quarter 10: _____ # of Days Late: _____ Quarter 11: _____ # of Days Late: _____ Quarter 12: _____ # of Days Late: _____				
4	Access the Lender ED 999 Late Report using the Web Interface		The prompt for the State should be displayed	1.17-3		
5	Select the identified State and press the "execute report" button		The prompt for the Lenders should be displayed	1.17-3		
6	Select the 3 identified Lenders and press the "execute report" button		The report with data should be displayed	1.17-3		
7	Verify that the report contains at least the identified 3 fiscal years of data with the # of Days Late for the first lender		Data for the fiscal years should be displayed (you may have to access subsequent pages to see the selected quarters)	1.17-2		
8	Verify that the # of Days Late on the report matches that from step 3a above		The data is as calculated in step 3	1.17-3, 1.17-5, 1.17-9		
9	Verify that the Number of Days Late is highlighted for late reports		The Lender ED 999 Late Report shall highlight the Number of Days Late for late reports	1.17-4		
10	Verify that the time period on the report appears in reverse chronological order		The quarters are in reverse chronological order	9.1-1		
11	Verify that the identified attributes are on the report: Lender, Fiscal Quarter, Date Received		The identified attributes are on the report	1.17-5		

## FP Data Mart – Release 2 Testing Acceptance

Step		Test Data	Expected Result	Condition X-ref	Status (Pass or Fail)	Actual Results/ Comments
12	Verify that the identified metrics are on the report: # of Days Late		The identified metrics are on the report	1.17-6		
13	Using the drop down box for the lender id in the page-by area, Verify that the report contains at least the identified 3 fiscal years of data with the # of Days Late for the second lender		Data for the second lender appears	1.17-7		
14	Verify that the # of Days Late on the report matches that from step 9b above		The data is as calculated in step 9	1.17-8; 1.17-8, 1.17-9		
15	Verify that the Number of Days Late is highlighted for late reports		The Lender ED 799 Late Report shall highlight the Number of Days Late for late reports.	1.17-4		
16	Verify that the time period on the report appears in reverse chronological order		The quarters are in reverse chronological order	9.1-1		
17	Verify that the identified attributes are on the report: Lender, Fiscal Quarter, Date Received		The identified attributes are on the report	1.17-5		
18	Verify that the identified metrics are on the report: # of Days Late		The identified metrics are on the report	1.17-6		
19	Using the drop down box for the lender id in the page-by area, Verify that the report contains at least the identified 3 fiscal years of data with the # of Days Late for the third lender		Data for the third lender appears	1.17-2		
20	Verify that the # of Days Late on the report matches that from step 9c above		The data is as calculated in step 9	1.17-8; 1.17-8, 1.17-9		
21	Verify that the Number of Days Late is highlighted for late reports		The Lender ED 799 Late Report shall highlight the Number of Days Late for late reports.	1.17-4		
22	Verify that the time period on the report appears in reverse chronological order		The quarters are in reverse chronological order	9.1-1		
23	Verify that the identified attributes are on the report: Lender, Fiscal Quarter, Date Received		The identified attributes are on the report	1.17-5		
24	Verify that the identified metrics are on the report: # of Days Late		The identified metrics are on the report	1.17-6		
25	Print the Report		The Report is Printed			
26	Verify the headings and page numbering for the report		The heading references FSA and the page numbering is appropriate			
27	Return to the prompt screen		prompt screen displays			
28	Select the identified State and press the 'execute report' button		The prompt for the Lenders should be displayed	1.17-7		
29	Select the first identified Lender and press the 'execute report' button		The report with data should be displayed	1.17-7		
30	Verify that the report contains at least the identified 3 fiscal years of data with the Days Late for the first lender		Data for the fiscal years should be displayed	1.17-2		



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[illegible]

## FP Data Mart – Release 2 Testing Acceptance

### 8.3 Mod Partner Ops Tracking Database

The screenshot displays the 'SFAMot Request DB' application window. The main form is titled 'Enter Request' and includes a star icon and the text 'Edit Record'. A warning message states: '\*\*\* Bold, Underlined Fields Must be Completed \*\*\*'. The form contains several input fields and sections:

- ID#**: 403
- Application**: FPDM R2-ST
- Opened By**: Leo Philips
- Request Type**: Bug Fix
- Priority**: Medium
- Complex Request**: ☐
- Request Title**: Lender Change in Loan Status: recall dates
- Requester Name**: Lee
- Assigned To**: Tino Liu
- Requester Phone #**:
- Assigned To Phone #**:
- Requester Email**:
- Assigned To Email**:
- Request Status**:
  - ☒ Opened: 5/17/2002 4:16:00 PM
  - ☐ Closed:
- Misc Status Options**:
  - ☐ Postponed
  - ☐ Needs Clarification
  - ☐ Rework Requested
- Target Date**:
- Time**:

Below the form, there is a section for 'Description', 'Resolution', and 'Activity Log'. The 'Description' tab is active, showing a text area with the instruction: 'Dates should be sorted in descending order on this report.' The 'Resolution' and 'Activity Log' tabs are also visible.

At the bottom of the window, there is a status bar showing 'Record: 18 of 243' and a taskbar with various application icons and the system clock showing 12:53 PM.

The “Application Type” will always be ‘FPDM R2-ST’ (ST for System Testing). There are other options for user acceptance testing, etc. When the developer/fix-it analyst has corrected the incident, they will log the date it was closed and any comments in the “Resolution” tab. In addition, the “Request Type” will be either ‘Bug Fix’ or ‘Enhancement’ based on the type of work that needs to be completed.

## **FP Data Mart – Release 2 Testing Acceptance**

### **8.4 System Testing Results**

The following pages show the System Incident Reports (SIRs) that were generated during System Testing. All System Testing SIRs have been closed except for the following:

**444: Optional Prompts on Lender Scorecard Reports**

- Depends on functionality in the new release of Microstrategy, scheduled to be implemented in July 2002

**448: Implement Security Based on Lender-GA Relationship**

- Depends on Lender-GA relationships to be provided by the Lender Redesign project, scheduled to start providing data in Release 3 of the FP Data Mart

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ID	Priority	Title	Description
391	Medium	Lender Interest Adjustments Bug	When select multiple states and multiple lenders, no data is returned in web though there should be data returned. Testing Sta
394	Medium	Default Claim Rate Metric	For the Lender Default Claim Rate report, I do not believe that the Default Claim Rate metric is working properly (perhaps the
397	Medium	Fix % Change in Delinquency Rate	% Change for Delinquency Rate in the Lender Change in Delinquency Rate Report does not seem to be functioning properly
398	Medium	Sort time desc period on Lender Voids report	In the Lender Voids Report, requirement 9.1.1 states that the time period on the report appears in revers chronological order.
399	Medium	% of Loans Voided Metric	In the Lender Voids Report, the % of Loans Voided metric does not seem to be working correctly.
400	Medium	No Lender Attribute on Lender Voids report	No Lender Attribute on Lender Voids report
401	Medium	Fix rounding in Lender Cohort Default Rate report	The rounding is off by .01 % for the Current and Originating Cohort Rate
403	Medium	Fix Sequence Number	Please update the Sequence Numbe to contain 4 digits
404	Medium	Update loading process for Lender Audit Report	The data loaded in the data mart does not match that of the PEPS system. Use lender 100018 as an example
405	Medium	Data for Lender Program Review	Look into the data for the Lender Program Review Report. Data in the PEPs source system was not loaded into the data mart. Ex
406	Medium	Update the sorting order on Lender Audit Results Report	Data should be in reverse chronological order for Lender Audit Results
408	Medium	Lender Change in Loan Status- resort dates	Dates should be sorted in decending order on this report.
409	Medium	GA Prompt on GA Closed School and False Certificatinon	the prompt on the GA Closed School and False Certification Claim report is not working. MSTR bug, Tina is working on a workaro

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410	Medium	Range of Data for Lender Change in Loan Status Report	The amount of data being returned for Lender Change in Loan Status Report is too high.
412	Medium	Update the Lookup table with proper data for fiscal month	For the Close School and False Certification Report, the data in the lookup table for fiscal months is loaded incorrectly. Ple
414	Medium	Update Lender Portfolio Percentage by GA Report	The Lender ID Should be in the Page by Area. If it needs to be in the detailed section of the report, you will need to update
415	Medium	Missing data in "Closed Schools" table	There is data missing when running the Closed School and False Certification Report. Please look in to this. Example is GA ID
416	Low	Access DB- GA Closed School and False Certification	Tina, could you look at the query for the GA Closed School and False Certification report and see why the School Branch Code is
418	High	GA Delinquency Aging Report - Data is Incorrect	Ran the GA Delinquency Aging report for GA 736 (New York) for the March 2001 quarter. The data on the report doesn't match the
419	Low	Order of Time Periods in Page-By Area	GA Delinquency Aging report, GA 736  Test condition 2.10-2 says that the report should contain data for the most recent time
420	Medium	Update Attributes and Metrics for GA Delinquency Aging	FPDM R2 rqts matrix needs to be updated with proper attributes and metrics for the GA Delinquency Aging report:  Attributes:
421	Medium	Remove Fiscal Year when Fiscal Quarter is in Page-By Area	The fiscal quarter ending date specifies a particular quarter in a fiscal year. Fiscal Year should be removed from the Page-By
423	High	Incomplete Data from NSLDS	On the FMS-NSLDS Cross-Check report, we have NSLDS data for AR-10 through AR-13 only. We need to get data for AR-1, AR-2, etc.
425	Medium	Fix Rank in GA Federal Fund Report	In the GA Federal Fund report, please update the rank so that it is ranked in descending order for % to Total Federal Ending Bal

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426	High	Filter out FMS records that don't have "Accepted" status	The database link from FMS has sent us data with status "in process" or "rejected". The Informatica mappings from the SR table
428	Medium	Need Footer on GA Fee Payments Report	Add a footer indicating that the report does not reflect adjustments made to Form 2000 data.
430	Medium	Update Requirements for GA Fee Payments History Report	Change attributes to: Invoice Date, Invoice Paid Date
431	Medium	Update Requirements for GA Requested and Paid Fees Report	FMS does not have a separate "DAF" invoice type in AP_INVOICES_ALL. Remove the "Requested DAF" and "Paid DAF" metrics from thi
432	High	Total Row on GA Requested and Paid Fees Report	Added a Total row on this report in TEST. Please verify that it is defined correctly and update DEV. I defined it the same w
433	Low	Microstrategy-displayed page numbers don't match actual #s	Is there a way to have the page numbers on printed reports match the numbers displayed by Microstrategy? Determine if this can
434	Medium	Need Optional Prompt on Lender Scorecard Analysis Report	The Lender Scorecard Analysis report should have an optional prompt on total portfolio range (could use FFEL portfolio level).
435	High	Update Mappings for VFA Performance Report	Many metrics on this report are blank: Dollar Ratio of Lender-Held Loans to Total Loan Portfolio, Reinsurance Trigger Rate - Pe
436	High	Determine how to link invoices to VFA weekly reports	Determine how to parse FMS invoice ID to determine which VFA weekly report it corresponds to. Have Chirayu update the mapping
437	High	Incorrect Score for Sales on Lender Scorecard	Ran lender scorecard for LID 800802 for FY2001. Using hardcopy Form 799s from FFEL, calculated score for Sales as follows:
438	High	Discrepancy in Lender Program Review Results Report	According to the Access DB containing PEPS data, two program reviews have been conducted for Lender ID 800802. But the report

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439	Low	Award Year in SR_LEAP_APPROPRIATION	The award year received from FMS should be a 4-digit year. We are storing it as a VARCHAR(2), which is okay as long as we add
442	High	Change Maximum Score for Change in Loan Status to Zero	Zero out the maximum score for the Change in Loan Status performance indicator on the Lender Scorecard. This indicator is supp
444	Medium	Optional Prompts on Lender Scorecard Reports	Implement optional prompts on portfolio range and servicer on Lender Scorecard after the new version of Microstrategy is instal
445	Medium	Update Requirements for Lender Scorecard Analysis Report	Change attributes to: Fiscal Year, Lender, Performance Indicator
446	Medium	Update Requirement for Drilling in the Fiscal Time Dimension	Update requirement 4.2 to indicate that the system shall display data down to the Quarter level in the Fiscal Time dimension "u
448	Medium	Implement Security Based on GA-Lender Relationship	Implement security based on GA-Lender relationship after the new version of Microstrategy is installed. GAs should only be abl
449	High	Discrepancies on VFA Performance Measures Report	There are some discrepancies on the VFA Performance Measures Report from NSLDS.
450	High	Update Requirements for VFA Performance Measures Report	Update the VFA Performance Measures Report as follows: change requirement 1.5.3.b.1 for "Total" rows to "Average" rows; change
453	High	Change Claim Paid metric to Claim Paid Incremental Amount	In "1.2.13 GA Closed School and False Certification" report, the "Claim Paid" metric should be "Claim Paid Incremental Amount"
454	Medium	New Loan Market Share Displayed Incorrectly	For custom groups Non-VFA GA and VFA GA, the new loan market share is calculated over the total amount per the custom group GA
387	Medium	Add Loan Type to Default Claim Rate Report	Add Loan Type to Default Claim Rate Report - Update Requirements (Ahmad) - Update Report (Tina) - Update Test Script (Lisa)
392	Medium	Add "By Loan Type" for Lendter Interest Adjustments Report	The Lender Ineterest Adjustment Report should be by Loan Type. - Update Requirements (Ahmad) - Update Report (Tina)

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393	Low	Add # of Days Late to Lender ED 799 Late Report	In the Lender ED 799 ED Report, can you update so that if the number of days late is zero, a "0" will be displayed instead of a
407	Medium	Move the Lender to the Page By in Lender Audit report	Move the Lender to the Page By in Lender Audit report
411	Medium	Update Closed School and False Certification Form	In the Closed School and False Certification Form in the Access DB, for souce data, please add fiscal month to form
413	Low	Prompt on School Change in Loan Status	On the School Change in Loan Status, can the prompt be updated to include the School ID? Also when searching for a school, am
427	Low	Clarification Needed on Which Invoice Date to Use	On reports based on F_GA_INVOICES (such as the GA Fee Payments Report), invoices are assigned to a fiscal year based on the inv
429	Low	Display \$0.00 instead of blanks where appropriate	Need to define count and amount columns to display zeroes where appropriate, rather than leaving them blank. Blank columns cou



## **FP Data Mart – Release 2 Testing Acceptance**

### **8.5 User Acceptance Testing Results**

For detailed instructions for completing the User Acceptance Test, please refer to the document entitled FP Data Mart – Release 2 User Acceptance Testing Coordination and Steps.

The following SIR was written as a result of UAT. It is a request for enhancements to Release 2 functionality and will consequently be addressed after Release 2 deployment:

<b>ID</b>	<b>Priority</b>	<b>Title</b>	<b>Description</b>
447	Low	Implement Enhancements from Richard Criswell	<p>In the Lender State prompt, implement search by lender name as well as by lender ID. This needs to wait until the new version of Microstrategy is installed.</p> <p>On the GA Federal Fund Report, add a % Change metric for each GA's federal fund ending balance across fiscal years. Also, the total GA portfolio should not be repeated for every line item (this is a Power User report).</p>

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### 8.6 Environment Testing Results

FP Data Mart - Release 1 Reports				
Folder	Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
<b>Root (No Folder)</b>	Data Mart Update Information	Mark Mandrella	5/22/2002	pass
<b>GA - Statement of Account</b>	SOA Billing Statement	Mark Mandrella	5/22/2002	pass
	SOA Fiscal Year To Date Activity Summary	Mark Mandrella	5/22/2002	pass
	SOA DDT	Mark Mandrella	5/22/2002	pass
	SOA Summary of Final Transactions	Mark Mandrella	5/22/2002	pass
<b>GA - Statement of Account (ext)</b>	SOA Billing Statement (ext)	Mark Mandrella	5/22/2002	pass
	SOA Fiscal Year To Date Activity Summary (ext)	Mark Mandrella	5/22/2002	pass
	SOA DDT (ext)	Mark Mandrella	5/22/2002	pass
	SOA Summary of Final Transactions (ext)	Mark Mandrella	5/22/2002	pass
<b>GA 1130</b>	Annual Report: Financial Fund Stmt	Mark Mandrella	5/22/2002	pass
	Part A: Guaranty Activity	Mark Mandrella	5/22/2002	pass
	Part C: Federal Receivable Age Category	Mark Mandrella	5/22/2002	pass
	Part C: Federal Receivable Information	Mark Mandrella	5/22/2002	pass
	Sources/Uses of Funds, Pending & Contingent Transactions	Mark Mandrella	5/22/2002	pass
<b>GA 1130 (ext)</b>	Annual Report: Financial Fund Stmt (ext)	Mark Mandrella	5/22/2002	pass
	Part A: Guaranty Activity (ext)	Mark Mandrella	5/22/2002	pass
	Part C: Federal Receivable Age Category (ext)	Mark Mandrella	5/22/2002	pass
	Part C: Federal Receivable Information (ext)	Mark Mandrella	5/22/2002	pass
	Sources/Uses of Funds, Pending & Contingent Transactions (ext)	Mark Mandrella	5/22/2002	pass
<b>GA 1189 Monthly Claims</b>	Part A - Reinsurance Request	Mark Mandrella	5/22/2002	pass
	Part B - Additional Reinsurance Requests	Mark Mandrella	5/22/2002	pass
	Part C - Change in Status Supplemental Reinsurance Requests	Mark Mandrella	5/22/2002	pass
	Part D - Full Refund of Reinsurance Claims	Mark Mandrella	5/22/2002	pass
	Part E - Refunds for Overpayments and Overbilling	Mark Mandrella	5/22/2002	pass

## FP Data Mart – Release 2 Testing Acceptance

FP Data Mart - Release 1 Reports				
Folder	Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
	Part F/J - Default/Bankruptcy/Wage Garnishment Collections	Mark Mandrella	5/22/2002	pass
	Part G - Activity on Accounts: Federal Tax Refund Offset	Mark Mandrella	5/22/2002	pass
	Part H - Rehabilitated Loans	Mark Mandrella	5/22/2002	pass
	Part I - Non-Payment Activity	Mark Mandrella	5/22/2002	pass
	GA 1189 - Entire Report	Mark Mandrella	5/22/2002	pass
<b>GA 1189 Monthly Claims (ext)</b>	Part A - Reinsurance Request (ext)	Mark Mandrella	5/22/2002	pass
	Part B - Additional Reinsurance Requests (ext)	Mark Mandrella	5/22/2002	pass
	Part C - Change in Status Supplemental Reinsurance Requests (ext)	Mark Mandrella	5/22/2002	pass
	Part D - Full Refund of Reinsurance Claims (ext)	Mark Mandrella	5/22/2002	pass
	Part E - Refunds for Overpayments and Overbilling (ext)	Mark Mandrella	5/22/2002	pass
	Part F/J - Default/Bankruptcy/Wage Garnishment Collections (ext)	Mark Mandrella	5/22/2002	pass
	Part G - Activity on Accounts: Federal Tax Refund Offset (ext)	Mark Mandrella	5/22/2002	pass
	Part H - Rehabilitated Loans (ext)	Mark Mandrella	5/22/2002	pass
	Part I - Non-Payment Activity (ext)	Mark Mandrella	5/22/2002	pass
	GA 1189 - Entire Report (ext)	Mark Mandrella	5/22/2002	pass
	Collections on Defaulted Loans	Mark Mandrella	5/22/2002	pass
	Default Dollars Paid to Lenders	Mark Mandrella	5/22/2002	pass
<b>GA Data Book</b>	Loan Volume Commitment	Mark Mandrella	5/22/2002	pass
<b>Lender - Other Reports</b>	Active Lenders	Mark Mandrella	5/22/2002	pass
	Consolidation Loan Rebate Fee	Mark Mandrella	5/22/2002	pass
	FN/LN Principal Comparison	Mark Mandrella	5/22/2002	pass
	Inactive Lenders	Mark Mandrella	5/22/2002	pass
	Lender 799 G/L Comparison	Mark Mandrella	5/22/2002	pass
	Lender Changes in Loan Principal	Mark Mandrella	5/22/2002	pass
	Multi-Year Portfolio Analysis	Mark Mandrella	5/22/2002	pass
	Part II/Part V Disbursement Comparison by Loan Type	Mark Mandrella	5/22/2002	pass
	Origination Fees Bought	Mark Mandrella	5/22/2002	pass
	Origination Fees Sold	Mark Mandrella	5/22/2002	pass
	Part III/Part VI Comparison	Mark Mandrella	5/22/2002	pass
<b>Lender 799 Reports</b>	Lender Search Report Summary	Mark Mandrella	5/22/2002	pass

## FP Data Mart – Release 2 Testing Acceptance

FP Data Mart - Release 1 Reports				
Folder	Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
	Part II - Loan Origination and Lender Loan Fees	Mark Mandrella	5/22/2002	pass
	Part III - Interest Benefits	Mark Mandrella	5/22/2002	pass
	Part IV - Special Allowance	Mark Mandrella	5/22/2002	pass
	Part V - Changes in Guaranteed Loan Principal	Mark Mandrella	5/22/2002	pass
	Part VI - Guaranteed Loan Portfolio Analysis for End of Quarter	Mark Mandrella	5/22/2002	pass
	Lender 799 - Entire Report	Mark Mandrella	5/22/2002	pass
	Lender 799 - Entire Report	Mark Mandrella	5/22/2002	pass
<b>Lender 799 Reports (ext)</b>	Lender Search Report Summary (ext)	Mark Mandrella	5/22/2002	pass
	Part II - Loan Origination and Lender Loan Fees (ext)	Mark Mandrella	5/22/2002	pass
	Part III - Interest Benefits (ext)	Mark Mandrella	5/22/2002	pass
	Part IV - Special Allowance (ext)	Mark Mandrella	5/22/2002	pass
	Part V - Changes in Guaranteed Loan Principal (ext)	Mark Mandrella	5/22/2002	pass
	Part VI - Guaranteed Loan Portfolio Analysis for End of Quarter (ext)	Mark Mandrella	5/22/2002	pass
	Lender 799 - Entire Report (ext)	Mark Mandrella	5/22/2002	pass
<b>Risk Assessment</b>	Claims Filed Compared to Claims Paid	Mark Mandrella	5/24/2002	pass
	Lender Portfolio and Annual Activity Summary Report	Mark Mandrella	5/22/2002	pass
	Consolidation Loan Fee Payment Analysis	Mark Mandrella	5/22/2002	pass
	Summarized Origination Fees Report	Mark Mandrella	5/22/2002	pass

Credit Management Data Mart Reports			
Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
H1 Delinquency Rates	Eric Merkel	5/22/2002	Pass
H1 Repayment Borrowers by Consolidation Type	Eric Merkel	5/22/2002	Pass
H1 Repayment Borrowers by Loan Type	Eric Merkel	5/22/2002	Pass
H2 Repayment Borrowers by Repayment Plan	Eric Merkel	5/22/2002	Pass
H3 Repayment Borrowers by School Type and Control	Eric Merkel	5/22/2002	Pass

## FP Data Mart – Release 2 Testing Acceptance

Credit Management Data Mart Reports			
Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
H4 Repayment Borrowers by Days Past Due	Eric Merkel	5/22/2002	Pass
I1 Delinquent Borrowers by Loan Type	Eric Merkel	5/22/2002	Pass
I2 Delinquent Borrowers by Repayment Plan	Eric Merkel	5/22/2002	Pass
I3 Delinquent Borrowers by School Type and Control	Eric Merkel	5/22/2002	Pass
MIS CF20 - Unique Borrower/Loan Counts and Amounts	Eric Merkel	5/22/2002	Pass
Table 10 - Delinquency Rates	Eric Merkel	5/22/2002	Pass
Table 10 - Delinquent Loans by Loan Type	Eric Merkel	5/22/2002	Pass
Table 1 - DLR by Status Code	Eric Merkel	5/22/2002	Pass
Table 2 - DLR by Loan Type	Eric Merkel	5/22/2002	Pass
Table 3 - DLR by Consolidation Type	Eric Merkel	5/22/2002	Pass
Table 4 - DLR by School Type	Eric Merkel	5/22/2002	Pass
Table 5 - DLR by Repayment Plan	Eric Merkel	5/22/2002	Pass
Table 6 - DLR by ICR (Repayment less than Interest)	Eric Merkel	5/22/2002	Pass
Table 7 - Total Amount Collected Since Inception	Eric Merkel	5/22/2002	Pass
Table 8 - DLR Repayment Option Breakdown	Eric Merkel	5/22/2002	Pass
Table 9 - DLR Repayment Option Breakdown	Eric Merkel	5/22/2002	Pass
Loan Booking Report	Eric Merkel	5/22/2002	Pass
Gross Disbursements by Actual Disbursement Month	Eric Merkel	5/22/2002	Pass
Net Disbursements by Actual Disbursement Month	Eric Merkel	5/22/2002	Pass
Payment Allocation	Eric Merkel	5/22/2002	Pass
Portfolio Analysis	Eric Merkel	5/22/2002	Pass
Weekly Status Report	Eric Merkel	5/22/2002	Pass
Detailed Transaction Listing	Eric Merkel	5/22/2002	Pass
Detailed Transaction Listing - Balances	Eric Merkel	5/22/2002	Pass

## FP Data Mart – Release 2 Testing Acceptance

Credit Management Data Mart Reports			
Report Name	Tested By	Date Tested	Test Status (Pass/Fail)
Part I Section A - Receivables and Collections - Dollars	Eric Merkel	5/22/2002	Pass
Part I Section A - Receivables and Collection - Numbers	Eric Merkel	5/22/2002	Pass
Part I Section B - Delinquent Debt by Age	Eric Merkel	5/22/2002	Pass
Part II Section A - Delinquent Debt 180 Days or Less	Eric Merkel	5/22/2002	Pass
Part II Section A - In Bankruptcy	Eric Merkel	5/22/2002	Pass
A_DEMOG_MONTH_1	Eric Merkel	5/22/2002	Pass
A_DEMOG_MONTH_2	Eric Merkel	5/22/2002	Pass
A_DEMOG_MONTH_3	Eric Merkel	5/22/2002	Pass
A_DEMOG_MONTH_4	Eric Merkel	5/22/2002	Pass
A_FIN_FMS	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_1	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_2	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_3	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_4	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_5	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_6	Eric Merkel	5/22/2002	Pass
A_FIN_MONTH_7	Eric Merkel	5/22/2002	Pass
F_LOAN	Eric Merkel	5/22/2002	Pass
1- DLSS Reconciliation Report	Al Bradley	37398	Pass
2- DLSS Reconciliation Report	Al Bradley	37398	Pass
3- DLSS Reconciliation Report	Al Bradley	37398	Pass
4- DLSS Reconciliation Report	Al Bradley	37398	Pass
SSN Loan Posting Report DLSS Date	Al Bradley	37398	Pass
SSN Loan Posting Report SSN WildCard	Al Bradley	37398	Pass
SSN Loan Posting Report Five SSNs	Al Bradley	37398	Pass
SSN Loan Posting Report Loan ID	Al Bradley	37398	Pass
SSN Loan Posting Report SLSS Code	Al Bradley	37398	Pass
DLSS IF010 COD Monthly	Al Bradley	37398	Pass
DLSS IF010 COD Weekly	Al Bradley	37398	Pass
High Level FMS Monthly	Al Bradley	37398	Pass
IF020 Reconciliation Report	Al Bradley	37398	Pass

## FP Data Mart – Release 2 Testing Acceptance

### 8.7 Stress Testing Results

FP Data Mart Release 2 Stress Testing Summary Results - June 03, 2002

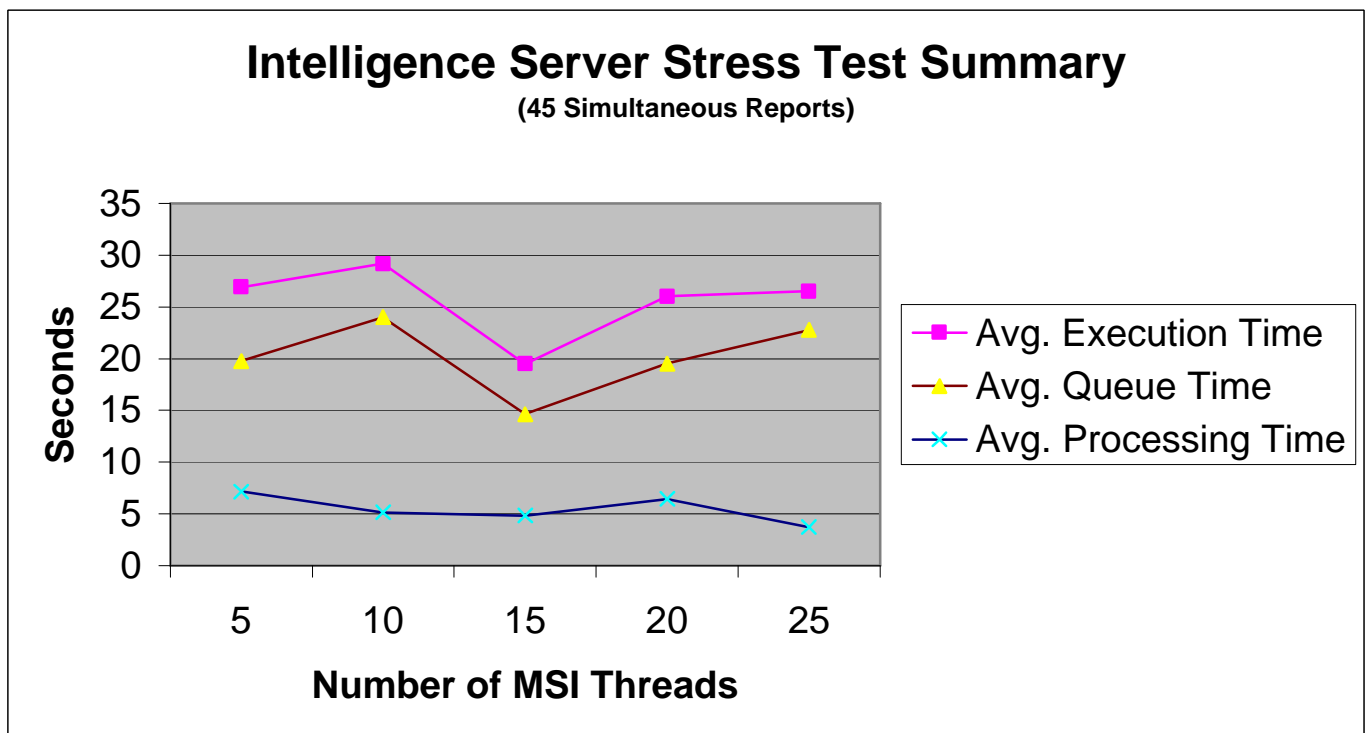
#### Intelligence Server Test 5/28/02 – 5/31/02

##### Objectives

- Ensure that the machine running Intelligence Server can handle the load of a large number of simultaneous reports. 45 High Complexity Reports were used to test a 'worst-case' scenario.
- Determine the optimal number of Intelligence Server threads into the Oracle database.

##### Results

- The Intelligence server was able to handle 45 simultaneous High Complexity reports without any errors.
- Optimal number of threads determined to be 15. When 45 reports are run simultaneously the optimal average execution time was at just under 20 seconds per report, with 15 seconds being Queue time and 5 seconds being processing time.



## **FP Data Mart – Release 2 Testing Acceptance**

### **Web Server Test 5/28/02 – 5/31/02**

#### *Objectives*

- To verify Web Server report-processing capacity remains at an acceptable level as the number of simultaneous reports increases.

#### *Results*

- Three different levels of report complexity were used with a combination of 1 Credit Management (CM) and 2 Financial Partners (FP) reports for each complexity:
  - Low Complexity - Table 4 (CM), Lender Purchases (FP), GA Closed School & False Certification (FP)
  - Medium Complexity - Loan Booking (CM), Lender ScoreCard Part I (FP), Lender Change in Delinquency Rate (FP)
  - High Complexity - Payment Allocation (CM), GA Request & Paid Fees (FP), GA Federal Fund Report (FP)
- Average run times for reports of different complexity were measured for three different passes:
  - PASS #1 - 3 Simultaneous Reports
  - PASS #2 - 15 Simultaneous Reports
  - PASS #3 - 45 Simultaneous Reports

The run times were all within acceptable levels. While each level of complexity saw nearly a 100% increase for the average report time between Pass 2 and 3, the performance was still satisfactory with the average end-to-end time (time to not just run the report but to also log in, navigate to the report and enter in selections) for 45 simultaneous reports still being under 4 minutes.



## FP Data Mart – Release 2 Testing Acceptance

### Web Server Stress Test Summary

